

CLAIM AMENDMENTS

Please amend the claims as follows:

1. (Currently amended) A device ~~101~~ for thermal management of an LED ~~120~~, said device comprising:
 - a heatsink ~~160~~;
 - a substrate ~~111~~ overlying said heatsink ~~160~~;
 - a trace layer ~~130~~ overlying said substrate ~~110~~; and
 - a via ~~180~~ extending through said substrate ~~111~~, wherein said via ~~180~~ is in thermal communication with said trace layer ~~130~~ and said heatsink ~~160~~ to transfer to said heatsink ~~160~~ at least a portion of any heat applied to said trace layer ~~130~~ by said LED ~~120~~.
2. (Currently amended) The device of claim 1, further comprising:
 - a bonding layer ~~170~~ between said substrate ~~110~~ and said via ~~180~~.
3. (Currently amended) The device of claim 2, wherein said bonding layer ~~170~~ is a thermally conductive adhesive.
4. (Currently amended) The device of claim 2, wherein said bonding layer ~~170~~ is a thermally conductive tape.
5. (Currently amended) The device of claim 1, wherein said substrate ~~111~~ is a multi-layered substrate ~~112~~.
6. (Currently amended) The device of claim 1, wherein said substrate ~~111~~ is a printed circuit board.
7. (Currently amended) The device of claim 1, wherein said substrate ~~111~~ is a flexible substrate.

8. (Currently amended) The device of claim 1, wherein said via ~~180~~ includes:
a sidewall ~~182~~ defining a channel ~~181~~ through said substrate ~~110~~, said channel ~~181~~ interfacing
with said trace layer ~~130~~ to thereby establish the thermal communication between said via ~~180~~
and said trace layer ~~130~~.
9. (Currently amended) The device of claim 8, further comprising:
a thermal conductive material filling at least a portion of said channel ~~181~~.
10. (Currently amended) The device of claim 1, wherein said via ~~180~~ includes:
a sidewall ~~182~~ defining a channel ~~181~~ through said substrate ~~110~~, said channel
~~181~~ interfacing with said heat sink ~~180~~ to thereby establish the thermal communication between
said via ~~180~~ and said heat sink ~~180~~.
11. (Currently amended) The device of claim 10, further comprising:
a thermal conductive material filling at least a portion of said channel ~~181~~.
12. (Currently amended) A device ~~101~~ for thermal management of an LED ~~120~~, said
device comprising:
a heatsink ~~160~~;
a trace layer ~~130~~; and
a flexible substrate ~~111~~ in thermal communication with said trace layer ~~130~~ and
said heatsink ~~160~~ to transfer to said heatsink ~~160~~ any heat applied to said trace layer ~~130~~ by said
LED ~~120~~.
13. (Currently amended) The device of claim 12, further comprising:
a via ~~180~~ extending through said substrate ~~111~~, wherein said via ~~180~~ is in thermal
communication with said trace layer ~~130~~ and said heatsink ~~160~~ to enhance the transfer to said
heatsink ~~160~~ of any heat applied to said trace layer ~~130~~ by said LED ~~120~~.

14. (Currently amended) The device of claim 13, wherein said via ~~180~~ includes:
a sidewall ~~182~~ defining a channel ~~181~~ through said substrate ~~110~~, said channel ~~181~~ interfacing with said trace layer ~~130~~ to thereby establish the thermal communication between said via ~~180~~ and said trace layer ~~130~~.

15. (Currently amended) The device of claim 14, further comprising:
a thermal conductive material filling at least a portion of said channel ~~181~~.

16. (Currently amended) The device of claim 13, wherein said via ~~180~~ includes:
a sidewall ~~182~~ defining a channel ~~181~~ through said substrate ~~110~~, said channel ~~181~~ interfacing with said heat sink ~~180~~ to thereby establish the thermal communication between said via ~~180~~ and said heat sink ~~180~~.

17. (Currently amended) The device of claim 16, further comprising:
a thermal conductive material filling at least a portion of said channel ~~181~~.

18. (Currently amended) A device ~~101~~ for thermal management of an LED ~~120~~, said device comprising:

a heatsink ~~160~~;
a substrate ~~111~~ overlying said heatsink ~~160~~;
a trace layer ~~130~~ overlying said substrate ~~110~~; and
a via ~~180~~ including a sidewall ~~182~~ defining a channel ~~181~~ extending through said substrate ~~110~~, wherein said channel ~~181~~ is beneath said trace layer ~~130~~ and above said heatsink ~~160~~ to transfer any heat applied to said trace layer ~~130~~ by said LED ~~120~~ to said heatsink ~~160~~.

19. (Currently amended) The device of claim 18, further comprising:
a thermal conductive material filling at least a portion of said channel ~~181~~.

20. (Currently amended) The device of claim 18, further comprising:
a bonding layer ~~170~~ between said substrate ~~110~~ and said via ~~180~~.